

In addition, it was acknowledged that the Kakiuchi et al patent does not teach the ratio of acrylic rubber to acrylonitrile-butadiene rubber as defined by dependent claim 3. However, it was then asserted that the use of such a ratio is taught by the Coran patent. Further, it was asserted that the Kakiuchi et al patent teaches the inclusion of the specific salt as defined by dependent claims 3, 4, 7 and 8. Reconsideration of this rejection in view of the following comments is respectfully requested.

Before discussing the rejection in detail, a brief review of the presently claimed invention may be quite instructive. Specifically, the fuel hose according to independent claim 1 has a laminate structure comprising an innermost layer formed with "a rubber blend of an acrylic rubber and an acrylonitrile-butadiene rubber in which acrylonitrile is present in a proportion of 15 to 30 wt%," and a fluororesin layer formed on a peripheral surface of the innermost layer. The fuel hose according to independent claim 5 has a laminate structure comprising an innermost layer formed with "an acrylic rubber having a skeleton derived from acrylonitrile in its molecular skeleton," and a fluororesin layer formed on a peripheral surface of the innermost layer. It is submitted that such a fuel hose is not taught or suggested by the patents to Kakiuchi et al and Coran.

More particularly, the Kakiuchi et al patent discloses a hose for automotive fuel piping which, as clearly shown in claim 1 and Fig. 1 thereof, comprises innermost layer 4 disposed inside inner layer 1 formed of fluororesin. It is disclosed that innermost layer 4

is "obtained by vulcanizing a vulcanization composition comprising NBR rubber or fluororubber each of which is compounded with a 1,8-diazabicyclo(5.4.0)undecene-7 salt and with an organophosphonium salt."

Among other things, the Kakiuchi et al patent fails to teach or suggest the use of acrylic rubber (ACM) for forming innermost layer 4. In this regard, specific attention is directed to the Description of the Art as contained on page 2, line 24 to page 4, line 6 of the subject specification. As is set forth therein, a hose according to the prior art such as that proposed in the Kakiuchi et al patent has problems in that:

"However, if such a hose as proposed in the above-mentioned Publication adopts an innermost layer of NBR, the resulting hose is drastically deteriorated in sour gasoline resistance, as mentioned above. Alternately, if such a hose as proposed in the same Publication adopts an innermost layer of FKM an adhesive property between the FKM and a fluoroelastomer layer is bad, which requires inter laminar bonding by means of an adhesive, resulting in complicated production and a possible increase in its production cost. Further, since the latter hose has an inferior low-temperature property (a sealing property when in use at an extremely low temperature (about -30°C)), improvement has been highly demanded.

In addition, it is very important for a fuel hose to have an electrical conductivity to dissipate static electricity, generated by a fuel pump, from the hose to outside the hose so as to help prevent accidents such as ignition of a fuel, (such as gasoline) which may otherwise occur due to the static electricity. However, in a hose having the innermost layer made of FKM, since FKM itself has substantially high electrical resistance, it is difficult to impart sufficient electrical conductivity, even with the addition of an electrically conductive agent such as carbon black. Alternately, if an amount of an electrically conductive agent blended is increased so as to impart sufficient electrical conductivity, the mechanical strength of the innermost

layer is decreased, which may result in a deterioration in the sealing property. Therefore, an innermost layer excellent at both electrical conductivity and sealing property has been greatly demanded even if such an electrically conductive agent is not added."

The fuel hose according to the presently claimed invention has the above-mentioned structure so as to solve these problems.

It is further submitted that the patent to Coran does not supply the above-noted teaching deficiencies of the Kakiuchi et al patent. More particularly, the Coran teaches a composition in which predetermined proportions of acrylic rubber (ACM) and acrylonitrile-butadiene rubber (NBR) are blended. However, the Coran patent merely discloses techniques relating to a blend composition, and does not suggest the use of such a blend composition in a hose so as to achieve the fuel hose according to the presently claimed invention. Further, the Coran patent teaches that the disclosed blend composition has good properties in connection with hot-oil resistance, oxidative aging resistance and resistance to ozone as set forth in columns 8 and 9 thereof. It is submitted that such properties would not suggest to one skilled in the art that such a blend composition would be suitable for use in a hose according to Kakiuchi et al patent. Therefore, it is submitted that it would not have been obvious to one skilled in the art to use the composition of Coran in the hose of the Kakiuchi et al patent in order to obtain the present invention.

With regard to the subject matter of independent claim 5, the fuel hose as defined therein comprises an innermost layer formed with "an acrylic rubber having a skeleton derived from acrylonitrile in its molecular skeleton." It is submitted that this particular acrylic rubber is not taught or suggested by either of the cited patents. Further, as clearly shown from a comparison between Examples and Comparative Example 1 in the subject specification, the fuel hose comprising an innermost layer formed with such an acrylic rubber having the defined skeleton has superior resistance to fuel oil to a fuel hose comprising an innermost layer formed with ordinary acrylic rubber.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1 through 8 over the cited patents are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

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any fee which is deemed necessary by the Patent and Trademark Office to be required
to effect consideration of this statement.

Respectfully submitted,

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